

In The Claims

Please amend the claims as follows:

Claims 1-53 (cancelled)

- 54 (new). A printing process for the transfer of printing substance (2) from an ink carrier (1) to an imprinting material (6), in which, with the help of an energy-emitting apparatus, which, during a process period, emits energy in the form of electromagnetic waves (3), and the printing substance (2) undergoes a change in volume and/or position, wherein, with the help of absorption bodies (4), energy is transferred from the electromagnetic waves (3) into the printing substance (2).
55. (new) A printing process according to claim 54, characterized in that wherein absorption bodies (4) are used which that are smaller than the wavelength of the electromagnetic waves (3).
56. (new) A printing process according to claim 54, wherein absorption bodies (4) are used that are smaller than 1/10 of the wavelength of the electromagnetic waves (3).
57. (new) A printing process according to claim 54, wherein absorption bodies (4) are used that are smaller than 1/50 of the wavelength of the electromagnetic waves (3).
58. (new) A printing process according to claim 54 wherein the apparatus emits energy in the form of laser light (3).
59. (new) A printing process according to claim 54 wherein a printing substance (2) is used which contains absorption bodies (4).

60. (new) A printing process according to claim 54 wherein the absorption bodies (4) absorb essentially all the light wavelengths.
61. (new) A printing process according to claim 54 wherein the absorption bodies (4) absorb essentially only the radiation with a wavelength or in a wavelength range which corresponds to the wavelength or wavelength range of the electromagnetic waves 3 emitted by the energy-emitting apparatus.
62. (new) A printing process according to claim 6, characterized in that the absorption bodies (4) are also used as dye.
63. (new) A printing process according to claim 61 wherein the absorption bodies (4) are accelerated in the direction of the imprinting material (6) by the electromagnetic waves (3) of the energy-emitting apparatus.
64. (new) A printing process according to claim 54 wherein an ink carrier (1) is used, on whose surface provided to receive the printing substance (2) absorption bodies (4) are present which form a solid layer.
65. (new) A printing process according to claim 54 wherein printing-point size is controlled by the quantity of energy released by the energy-emitting apparatus.
66. (new) A printing process according to claim 65 wherein the quantity of energy released by the energy-emitting apparatus is controlled by a process period.
67. (new) A printing process according to claim 58 wherein printing-point size is controlled by a profile of the laser light.

68. (new) A printing process according to claim 54 wherein differences in brightness of the image to be printed are achieved by variation of the printing-point size.
69. (new) A printing process according to claim 54 wherein the process period is shorter than 1 μ s.
70. (new) A printing process according to claim 54 wherein the process period is shorter than 250 ns .
71. (new) A printing process according to claim 54 wherein the process period is shorter than 100 ns.
72. (new) A printing process according to claim 54 wherein the process period is shorter than 50 μ s.
73. (new) A printing process according to claim 54 wherein during the process period an energy density higher than 500 kW/cm² is generated at the absorption body (4).
74. (new) A printing process according to claim 54 wherein during the process period an energy density higher than 2 MW/cm² is generated at the absorption body (4).
75. (new) A printing process according to claim 54 wherein during the process period an energy density higher than 10 MW/cm² is generated at the absorption body (4).
76. (new) A printing process according to claim 54 wherein the absorption bodies (4) are heated during the process period with an average heating rate greater than 10⁹ K/s.
77. (new) A printing process according to claim 54 wherein the absorption bodies (4) are heated during the process period with an average heating rate greater than 10¹¹ K/s.

78. (new) A printing process according to claim 54 wherein the thickness of the printing substance (2) on the ink carrier is less than 50 μm
79. (new) A printing process according to claim 54 wherein the printing substance (2) is selected so that the viscosity lies between 0.05 and 0.5 Pas.
80. (new) A printing process according to claim 54 wherein for the production of a printing point with a diameter greater than 100 μm , an energy of not more than 10 μJ , is transferred.
81. (new) A printing process according to claim 54 wherein through the change in volume and/or position of the printing substance some of the printing substance is removed from the ink carrier and is at least partly transferred to the imprinting material.
82. (new) A printing machine for printing on an imprinting material with an ink carrier (1) and an energy-emitting apparatus, which is arranged such that energy can be transferred in a targeted manner onto certain areas of the ink carrier (1), wherein absorption bodies (4) on the ink carrier are provided for absorbing the energy.
83. (new) A printing machine according to claim 82, wherein the energy-emitting apparatus is a laser.
84. (new) A printing machine according to 82, wherein the absorption bodies (4) are of a size which is smaller than 1 μm .
85. (new) A printing machine according to 82, wherein the absorption bodies (4) are of a size which is smaller than 200 nm.

86. (new) A printing machine according to claim 82, wherein the absorption bodies (4) are of a size which is between 10 and 50 nm.
87. (new) A printing machine according to claim 82, wherein the absorption bodies consist of carbon black particles, titanium nitride or mixtures thereof.
88. (new) A printing machine according to claim 82, wherein the absorption bodies (4) are arranged in an absorption layer (9) arranged on the ink carrier (1).
89. (new) A printing machine according to claim 82, wherein the proportion of the absorption bodies (4) in the absorption layer (5) is greater than 40 wt percent.
90. (new) A printing machine according to claim 88, wherein the absorption layer (9) consists of pressed absorption bodies (4).
91. (new) A printing machine according to claim 88, wherein the absorption bodies (4) are embedded in an organic or inorganic polymer matrix.
92. (new) A printing machine according to claim 88, wherein at the ink carrier (1) has a surface structure which consists of recesses and/or elevations.
93. (new) A printing machine according to claim 82, wherein light-focussing elements are applied to the ink carrier.
94. (new) A printing machine according to claim 82, wherein the ink carrier is transparent and the light-focussing elements are integrated into the ink carrier.

95. (new) A printing machine according to claim 93, wherein the light-focussing elements are formed by a flexible polymer film.
96. (new) A printing substance, characterized in that absorption bodies (4) are included.
97. (new) A printing substance according to claim 96, wherein the absorption bodies (4) are of a size which is smaller than 1 μm .
98. (new) A printing substance according to claim 96, wherein the absorption bodies (4) are of a size between 10 and 50 nm.
99. (new) A printing substance according to claim 96 wherein the printing substance consists of binder, dye or pigment, solvent, additives and the absorption bodies (4).
100. (new) A printing substance according to claim 96 wherein the absorption bodies (4) form the dye.
101. (new) A printing substance according to claim 96 wherein a blowing agent selected from the group consisting of alcohol, ester, ketones or water, is included.

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Respectfully submitted,

A handwritten signature in dark ink, appearing to read "Michael L. Dunn", followed by a horizontal line.

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